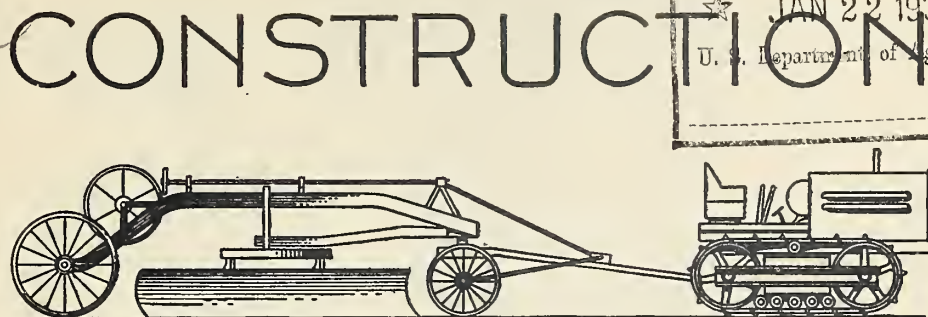
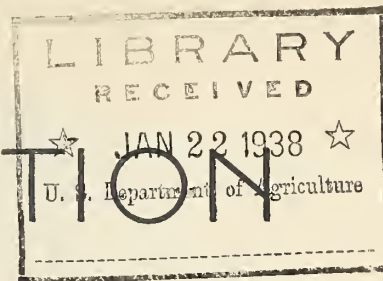


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Do not assume content reflects current scientific knowledge, policies, or practices.

Agr. Lib.

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Revised*



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE
WASHINGTON, D. C.

Vol. 4

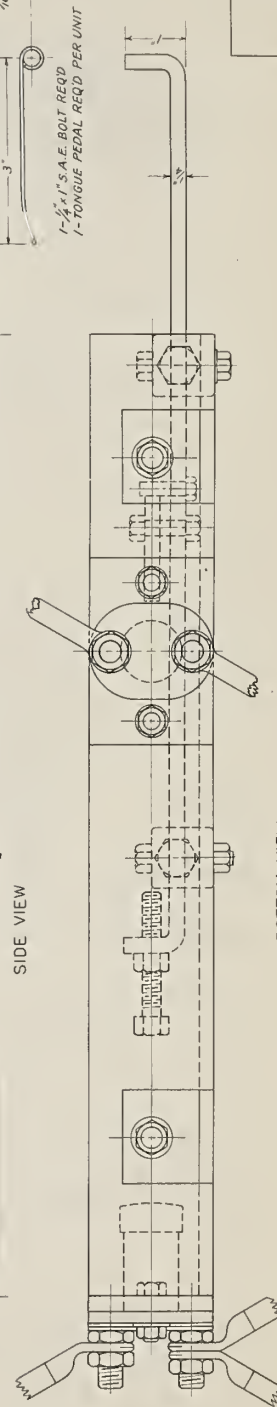
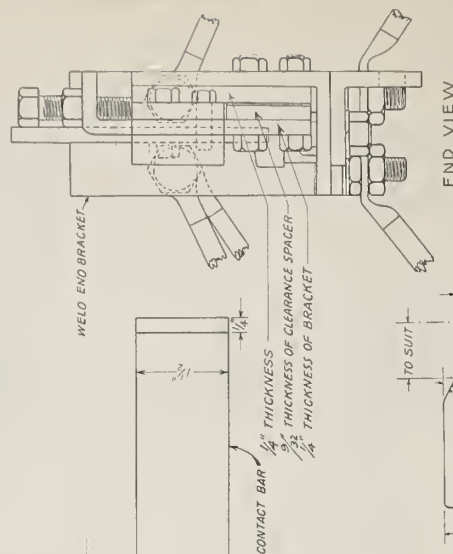
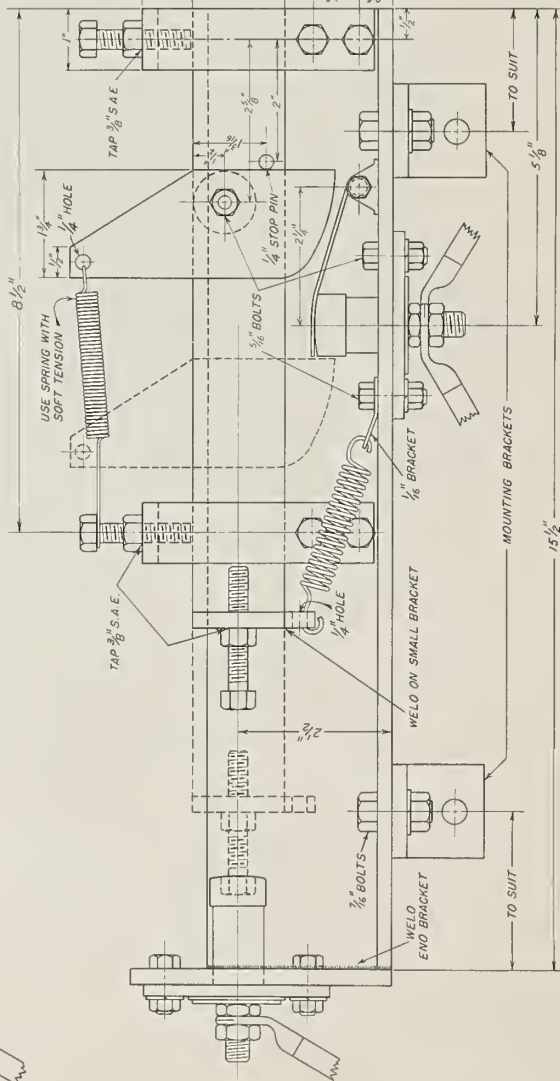
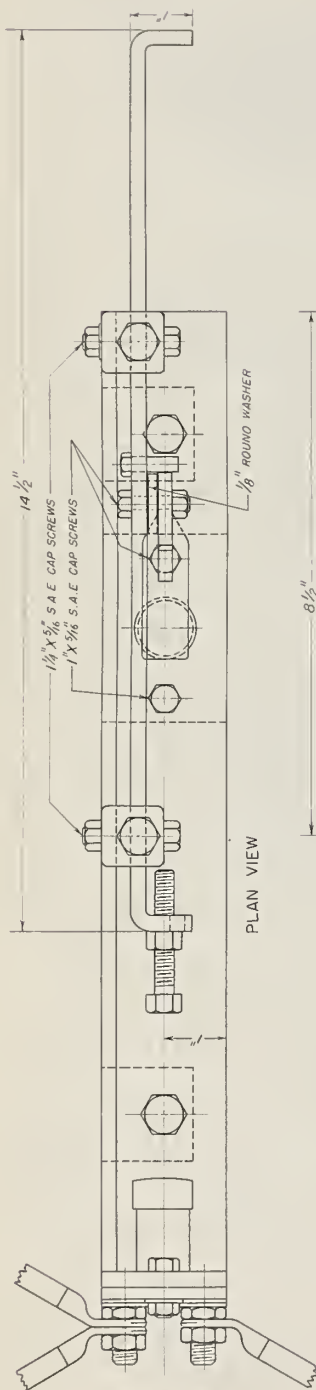
January 8, 1938.

No. 1

SPECIAL STARTING SWITCH

This idea might be described as a 2-stage switch, and its purpose is to eliminate the troubles which we have with the standard factory starter switch on all "50" Caterpillar tractors. The twelve-volt power of the factory switch is entirely too sudden and harsh, causing considerable jamming and breaking of the starter mechanism. This scheme permits starter engagement to be made more gently by using only six volts. Automatically, and immediately after engagement is made, the full twelve volts are applied to turn the motor over. The plan has been in use for about a year now and has proved very successful.

(over)

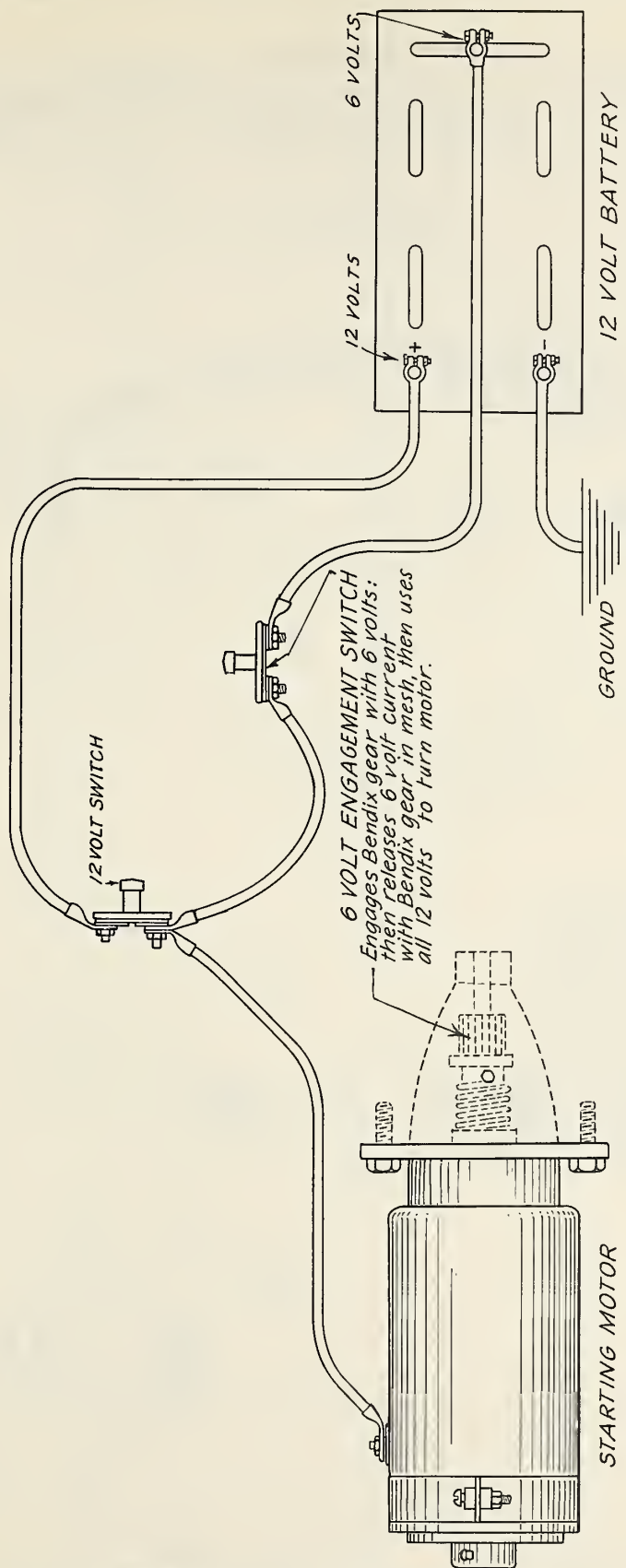


2 REQD PER UNIT

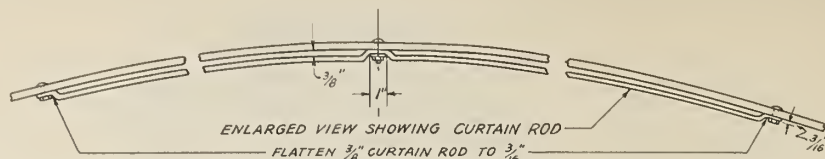
1-1/2" SAE BOLT REQD
1-TONGUE PEDAL REQD PER UNIT

U.S. FOREST SERVICE, REGION 6
STARTING SWITCH FOR
50 CATERPILLAR TRACTOR
WILLOW NATIONAL FOREST, ENTERPRISE, ORE
DESIGN BY L.L. WATERMAN, APPROVED BY L.B. FLYNN
DRAWN BY G.W.F., TRACED BY G.W.P., CHECKED BY E.E.H.
9-28-57 PORTLAND, ORE
114 WASH OFFICE

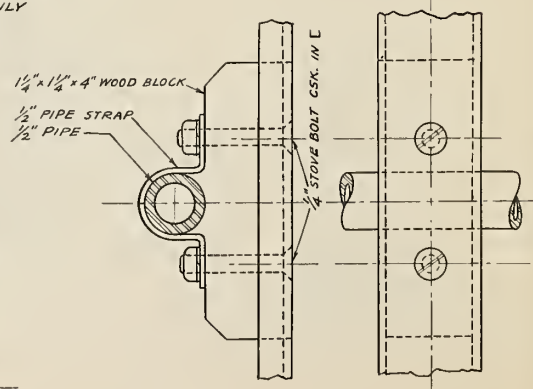
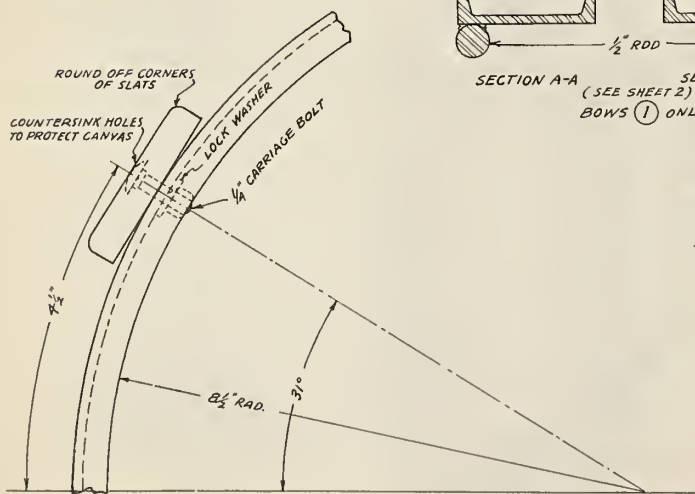
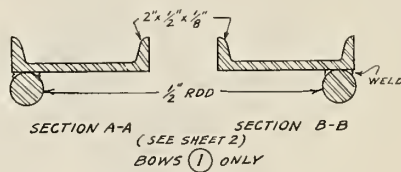
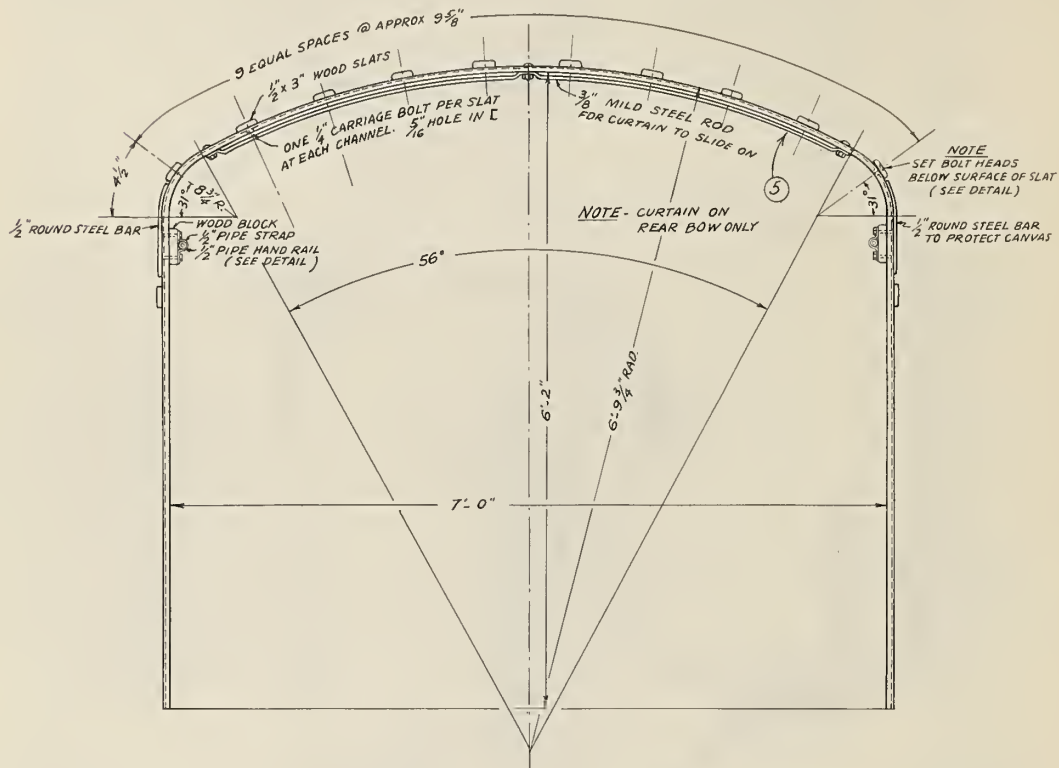
SHEET 1 OF 2 SHEETS



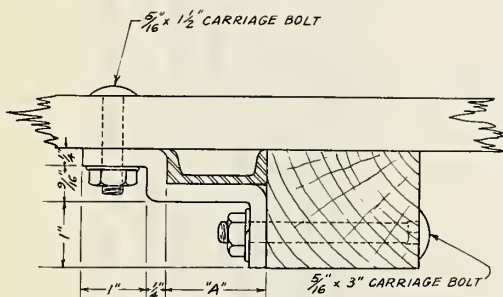
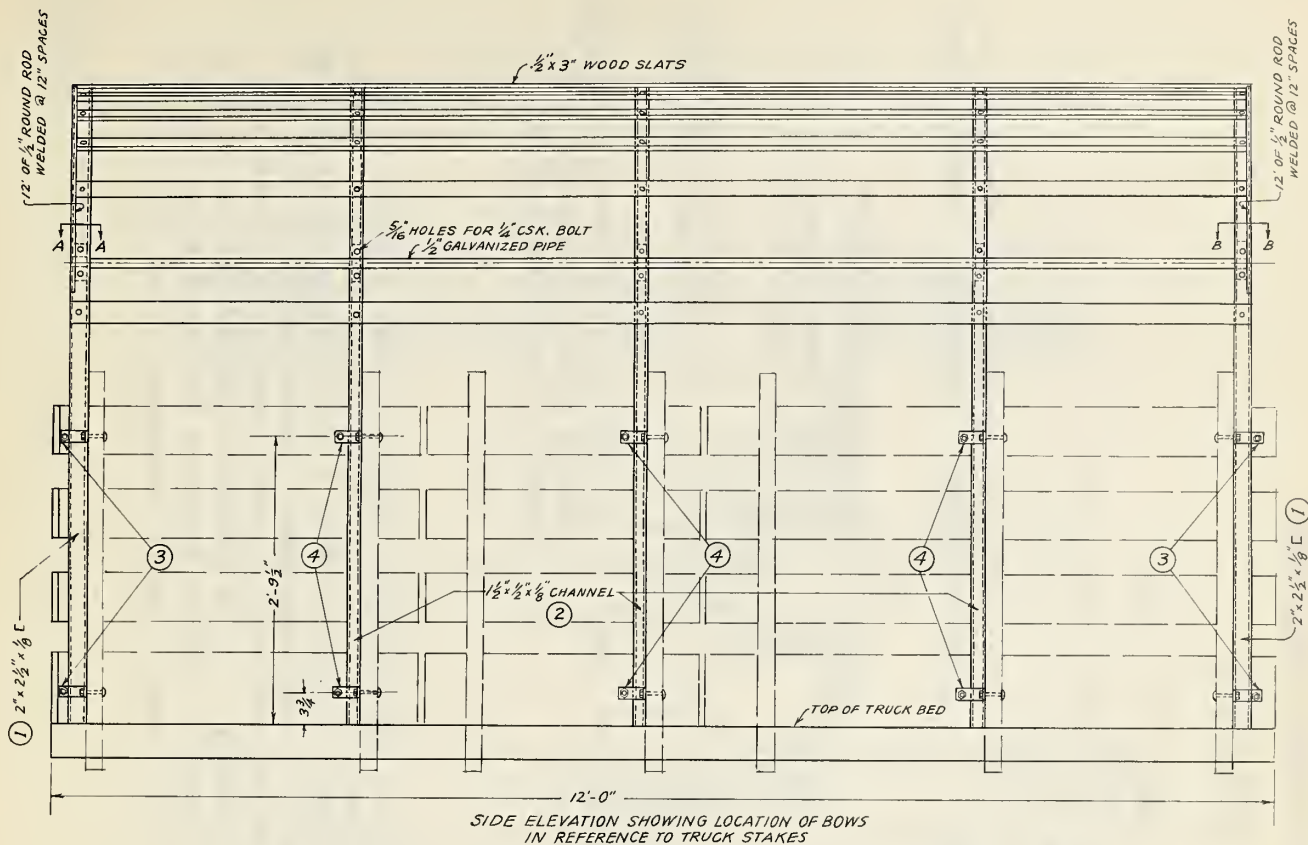
WIRING DIAGRAM
OF STARTING SWITCH
(SHEET 2 OF 2 SHEETS)



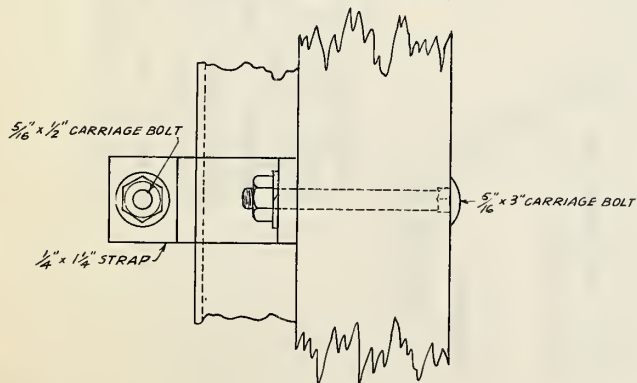
1 REQD. PER TRUCK
 $\frac{3}{8} \times 7'-4"$ M.S. ROD (5)



SHEET 1 OF 2 SHEETS



8 BRACKETS REQUIRED PER TRUCK ("A" = 2" FOR (3))
12 " " " " ("A" = 1 1/2" FOR (4))



- BILL OF MATERIAL**
- 3 BOWS OF 1 1/2 x 1/2 x 1/8" CHANNEL
 - 2 BOWS OF 2" x 1/2 x 1/8" CHANNEL
 - 2 RODS, MILD STEEL, 1/2" x 12', WELDED TO OUTSIDE OF EACH OF THE 2" CHANNELS: -SEE DETAIL
 - 1 ROD, MILD STEEL, 3/8", FOR CURTAIN
 - 12 BRACKETS, 1 1/4 x 1/4 x 1/4" STRAP, FOR 1 1/2" BOWS
 - 8 BRACKETS, 1 1/4 x 1/4 x 1/4" STRAP, FOR 2" BOWS
 - 2 PIECES OF 1/2" GALV. PIPE, 12' LONG, PLAIN ENDS
 - 10 PIPE STRAPS, (GALV.) FOR 1/2" PIPE
 - 20 STOVE BOLTS, 1/4" x 2", WITH NUTS, FOR PIPE STRAPS
 - 60 STOVE BOLTS, 1/4" x 1" WITH NUTS, FOR WOOD SLATS
 - 3 CARRIAGE BOLTS, 5/16" x 1", WITH NUTS, FOR CURTAIN ROD
 - 12 SLATS OF FIR WOOD, 1/2 x 3" x 12'-0", S4S
 - 10 PIECES OF 1/4 x 1 1/4 x 4", NET, S4S, "FIR"
 - 20 CARRIAGE BOLTS, 5/16" x 3", WITH NUTS, FOR BRACKETS
 - 20 CARRIAGE BOLTS, 5/16" x 1 1/2" WITH NUTS, FOR BRACKETS
 - 80 LOCK WASHERS, FOR 1/4" STOVE BOLTS
 - 43 LOCK WASHERS, FOR 5/16" CARRIAGE BOLTS

U. S. FOREST SERVICE, REGION 6
**FRAME FOR FOREST SERVICE
TRUCK BOWS**

DESIGN BY H.C.D. & C.H.D. APPROVED — T. P. FLYNN
DRAWN BY W.H.S. TRACED BY D.W.R. CHECKED BY R.E.N.
RETRACED 1-5-39 PORTLAND, ORE.
IN WASH. OFFICE

JANUARY 1937

elbow 2nd →

2 $\frac{1}{2}$ " riser pipe - 3' long

8" or 12" metal casing cut to straddle pipes on sides of stop cock. Provide cover.

Discharge from tank
Cover with 18" of soil

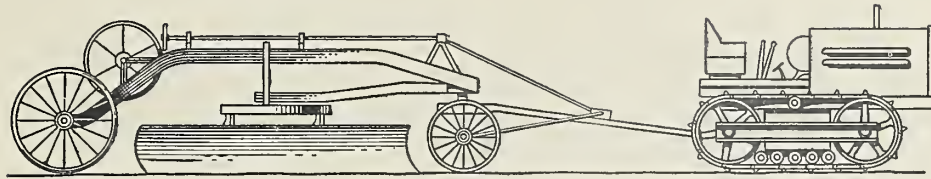
2 1/2" pipe 18" long

2½" Standard brass steam cock 125#.
working pressure. Square head.
Equal to Crane Company #250.

On account of freezing temperatures and resultant damage to fire valves, it is necessary to provide approximately 18 inches of cover on all pipes unless drained. A brass stop cock is specified to act as a submerged valve rather than a regular gate valve, being less expensive and not subject to leakage. It will also make it unnecessary to lock the valves; however, all pumper trucks must be provided with a special wrench to operate the stop cock at the bottom of the protective casing. It is desirable that at the end of the fire season that the plug on the tee be loosened, thereby draining the stand pipe, but in case this is not done, no serious damage could result and if necessary, stand pipe can be cheaply replaced.

H. Fitting
January 1937

CONSTRUCTION



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE

WASHINGTON, D. C.

1938

CALENDAR

1938

JANUARY

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JULY

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FEBRUARY

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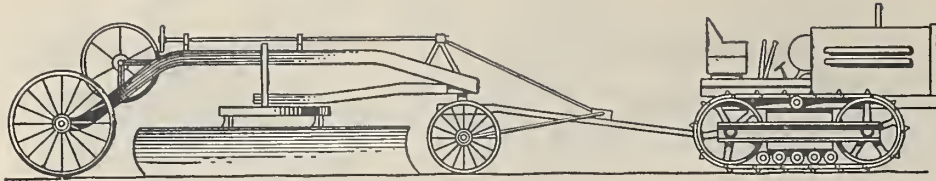
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DECEMBER

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FEBRUARY

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FEBRUARY

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MAY

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JULY

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AUGUST

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AUGUST

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OCTOBER

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OCTOBER

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NOVEMBER

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DECEMBER

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DECEMBER

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